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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/620,764      | 07/17/2003  | Kari Niemela         | 60091.00204         | 9147             |

32294 7590 12/12/2006

SQUIRE, SANDERS & DEMPSEY L.L.P.  
14TH FLOOR  
8000 TOWERS CRESCENT  
TYSONS CORNER, VA 22182

EXAMINER

NGUYEN, LEE

ART UNIT PAPER NUMBER

2618

DATE MAILED: 12/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/620,764

Applicant(s)

NIEMELA, KARI

Examiner

LEE NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2,5-7,10,13-15,18,21-23, 26 is/are allowed.
- 6) ☒ Claim(s) 1,3,4,8,9,11,12,16,17,19,20,24 and 25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

This action is responsive to the communication filed 9/21/2006.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 9, 11, 17, 19 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Chizhik et al. (US 2004/0203395).

Regarding claims 1, 9, 17, and 25, Chizhik teaches a method/means for compensating Doppler shift in a telecommunication system, where at least one user terminal 235 is moving in relation to a network element 230 (fig. 2), comprising: inherently measuring a received uplink signal (calculating or receiving signals that have a similar Doppler shift, see abstract and para [0041]); estimating an amount of Doppler frequency compensation for at least one downlink signal related to a user terminal based upon a measured received uplink signal (Doppler compensatable, abstract, determining Doppler shift in para [0085]); and compensating a Doppler shift for at least one downlink signal related to the user terminal by shifting a frequency of the signal according to the estimated amount of Doppler frequency compensation (processing one or more of the

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Doppler-compensatable to compensate for the Doppler shift, see abstract and [0040], and Doppler pre-compensation in para [0084]).

Regarding claims 3, 11, 19, Chizhik also teaches that the estimation takes into account the previously made Doppler effect compensation (see already determined in [0085]).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 8, 12, 16, 20 and 24 rejected under 35 U.S.C. 103(a) as being unpatentable over Chizhik et al. in view of Geier (US 5,525,998).

Regarding claims 4, 8, 12, 16, 20 and 24, Chizhik fails to teach that the estimation of Doppler frequency compensation utilizes information on system geometry, and that the estimated amount of the Doppler frequency compensation is filtered or weighted for increasing estimation accuracy. Geier teaches that Doppler frequency compensation utilizes information on system geometry, and that the estimated amount of the Doppler frequency compensation is filtered or weighted (col. 6, lines 24-35 and col. 7, lines 44-57). It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine Geier with Chizhik in order to satisfy the requirement of Doppler measurement since all Doppler error variances will not be equal.

***Allowable Subject Matter***

Claims 2, 5-7, 10, 13-15, 18, 21-23, 26 are allowed.

***Response to Arguments***

Applicant's arguments filed 9/21/2006 have been fully considered but they are not persuasive.

In the remarks, Applicant argues that there is no need to receive more than one signal in claim 1 as disclosed by Chizhik.

In response, the examiner respectfully disagrees. Independent claims 1, 9, 17 and 25 do not call for the exclusion of receiving more than one signal.

Applicant further argues that independent claims 1, 9, 17 and 25 do not require that directional signals would be formed before Doppler shift compensation.

Similar to the response mentioned above, Independent claims 1, 9, 17 and 25 do not exclude directional signals.

Finally, regarding the rejection of dependent claims 4, 8, 12, 16, 20 and 24. Applicant argues that it is improper to combine Geiner to Chizhik because they are unrelated technical field.

The examiner respectfully disagrees. As shown in figure 2, step 40, Geiner also teaches the Doppler compensation. Therefore, Geiner and Chizhik are also related in the technical field.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEE NGUYEN whose telephone number is 571-272-7854. The examiner can normally be reached on FIRST FRIDAY OFF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ANDERSON D. MATTHEW can be reached on 571-272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



LEE NGUYEN  
PRIMARY EXAMINER